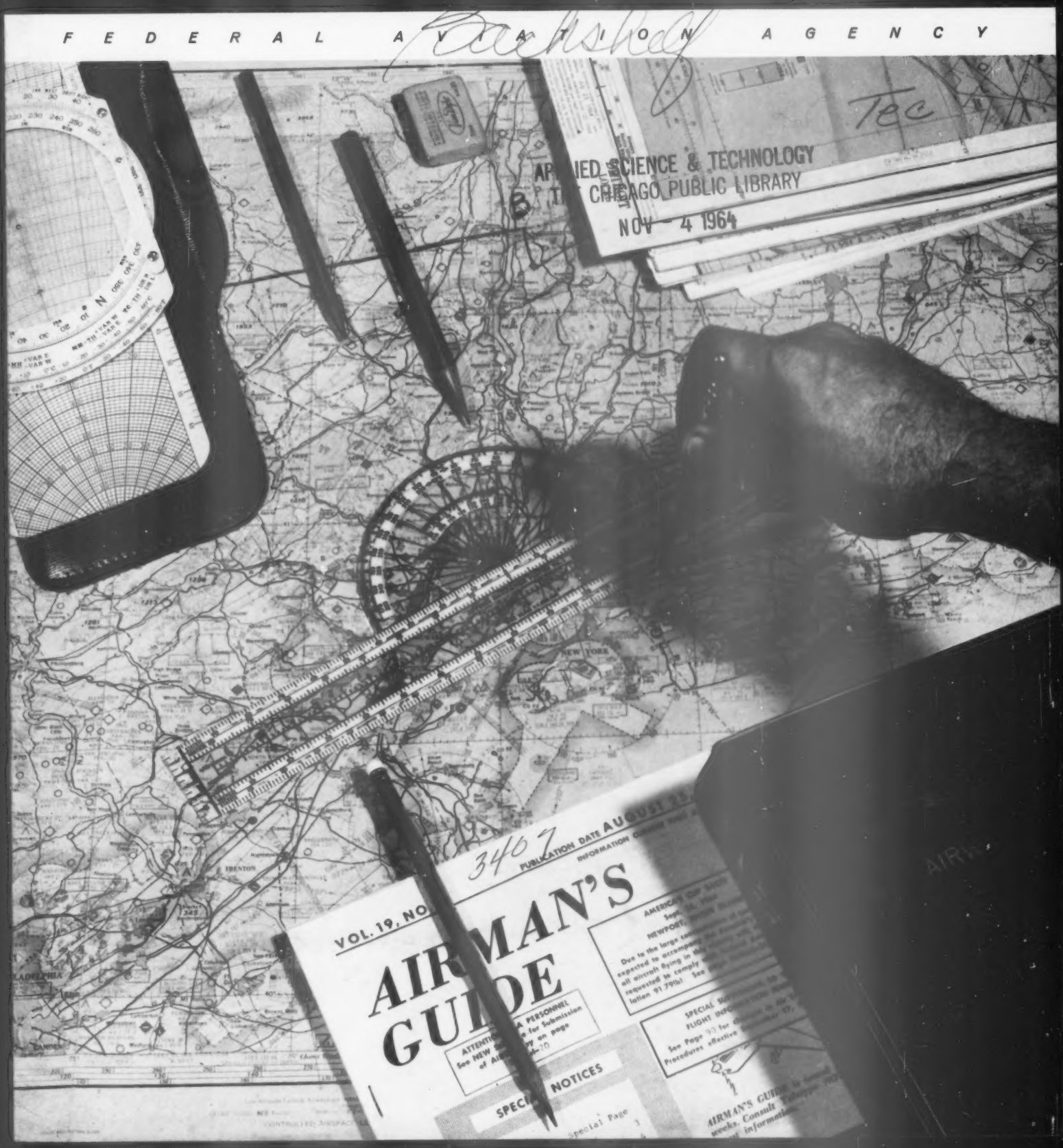
FAA | AVIATION NEWS

OCTOBER 1964

F E D E R A L A V I A T I O N A G E N C Y



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F E D E R A L A V I A T I O N A G E N C Y

VOL. 3, NO. 6 OCTOBER 1964

COVER

Preflight navigation planning allows more time for flying and adds to safety and pleasure.
See page 10.

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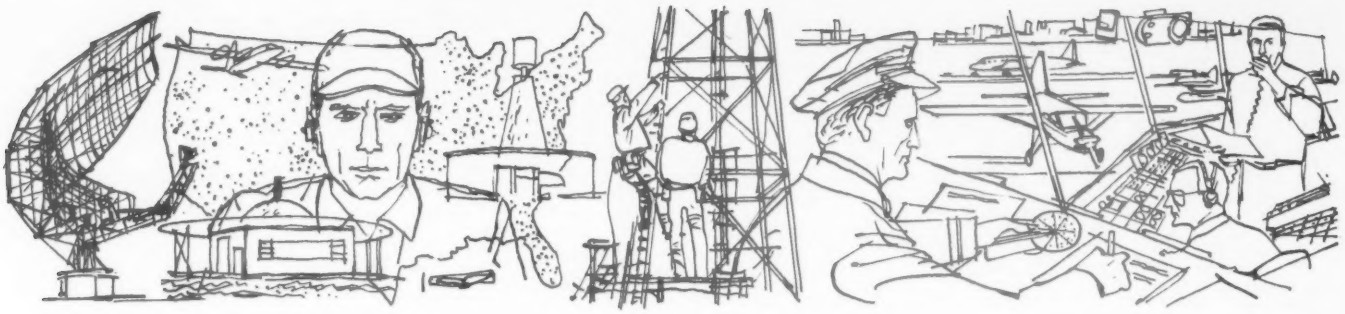


AGENCY REJECTS SHORT HAUL TRANSPORT DESIGN PROPOSALS

Expressing disappointment with the design proposals for a DC-3 replacement, Administrator N. E. Halaby told a Washington, D. C. press conference last month that no contracts will be awarded to any of the firms who have submitted design specifications. (July *FAA Aviation News.*)

"We don't see in these proposals, a proposal so advanced and unique . . . it is worth spending $100,000 of the taxpayers' money on it," Halaby said.

Under the competition for a short haul transport design, seven U. S. firms were vying for $100,000 FAA contracts.

Up to three firms could have received contracts to prepare detailed design specifications. A 50-man evaluation team including FAA, NASA, CAB, Departments of Commerce and Defense and others made the evaluation.

Halaby indicated that "a couple" manufacturers who did not submit proposals in the design competition said they may come forward with a design when the deadline for submission of detailed specifications are due Nov. 1.

Questioned on phases of the supersonic transport program by some 50 press, radio and television representatives at the conference, Halaby said he felt that the sonic boom problem "was not unsurmountable."

Further sonic boom tests are planned, mainly in isolated areas, Halaby said. These will include night sonic booms (not attempted during the Oklahoma City sonic boom public acceptance tests, September *FAA Aviation News*) and checking the boom effect on structures at desert locations. He stated further that he had suggested the British and French conduct sonic boom tests in Europe.

Discussing his recent trip to England and Ireland, Halaby said that the British and French SST program had been proceeding rapidly until they had to make costly revisions in their project to increase seat capacity and range.

The U. S. SST program has been a "deliberate program," Halaby said, which anticipates such problems as it goes along. Two airframe and two engine manufacturers developing the American SST are to submit their designs by Nov. 1. These will be tested in NASA wind tunnels and evaluated by a 100-man Federal committee and by the airlines.

Citing "a surge forward in the use of the air space," Halaby noted that the Budget Bureau had approved the first stage of the National Air Space system which provides for positive identification of aircraft by code, and a constant altitude reading of the aircraft on the controller's radar scope. Funds have been approved for an experimental complex to be established at Atlantic City, with a target operation date of late 1966 or early 1967, and a service test center controlling live traffic in 1967. If Congress provides funds for FY 1966, the system will be in general use by 1970, Halaby said.

Another advance in the air space for civil aviation, Halaby noted, was direct routes from city to city for civil pilots flying at higher altitudes, thus providing a saving in airline costs and a decrease in air traffic delays.

Halaby also noted that on Sept. 17, "the U. S. air space will come down from three layers, high altitude, intermediate altitude and low altitude, into two layers.

"For pilots having to carry three sets of maps to traverse the air space in a jet, it simply means lifting out the medium intermediate altitude.

"It also means a more efficient job can be done by the controller as well as the pilot."

Although the sonic boom tests were concluded in July, Halaby said hundreds of additional claims have been filed. So far, of the 3,000 claims submitted, 182 claims totaling $10,000 have been paid for damages following investigation by three distinguished Oklahoma citizens.

NATION'S TOP AVIATION EXECUTIVES GATHER AT 'SHAREHOLDERS' SESSION

The major problems facing aviation today are to be analyzed in depth during the first "airspace shareholders" session, Sept. 30-Oct. 1, at the FAA headquarters in Washington, D. C.

Some 100 top aviation executives from industry and government will participate (September *FAA Aviation News*).

FAA Administrator N. E. Halaby, who is to be present at all sessions, said:

"From time to time we in aviation need to take stock of some of the nation's most valuable resources—the airmen, the airspace, the airways, the airplanes and the airports which comprise the National Aviation System. The symposium is designed to give the users of the airspace an opportunity to sit down together for a comprehensive 360-degree view of our industry."

The Sept. 30 morning agenda will include the Administrator's evaluation of the National Aviation System, its component parts, the present stage of development and related costs and revenues. The afternoon session will include a presentation of air traffic control through a closed circuit TV showing of operations at the Washington Air Traffic Control Center at Leesburg, Va., and film clips showing future developments, such as alphanumerics, that are to be worked into the system.

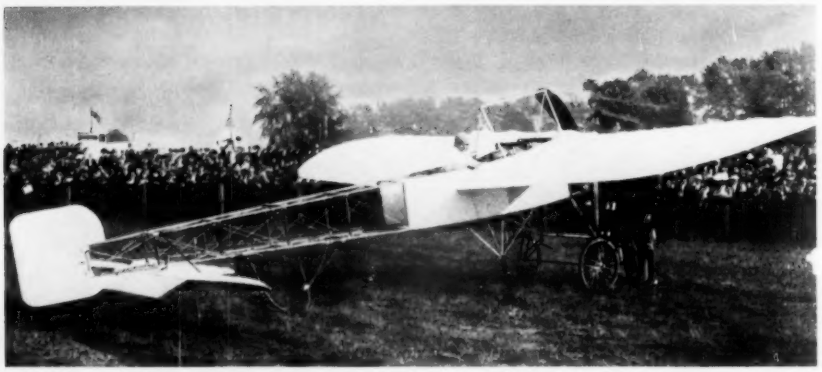
FAA's research and development programs will be explained at the first session on Oct. 1. Matters of special interest to general aviation and to air carriers will be presented in separate afternoon meetings, with the groups joining for a final summary before adjourning.

Several FAA exhibits, including the one on airports in the adjoining photograph, will be on display. Also, various manufacturers will exhibit equipment that has been developed for the Agency through a joint effort by research and development experts representing the Federal Aviation Agency and private industry.

The National Aviation Club, Washington, D. C., will hold a reception for the group on Sept. 30.

Cole Morrow, right, Director of the Federal Aviation Agency's Airports Service, and Thomas Burnard, Executive Vice President of the Airport Operators Council, preview the airport exhibit that is to be unveiled at the FAA's "airspace shareholders" meeting in Washington, D.C., Sept. 30-Oct. 1.

MILESTONES IN AVIATION



The first plane to fly across the English Channel, Louis Bleriot's No. XI 1909 monoplane, signalled the beginning of a new era in air power.

His channel flight on the morning of July 25, 1909, from Barraques on the French coast to Dover Castle, England, a distance of 20 miles, took only 37 minutes. Sir Alan Cobham noted at the time, "The day that Bleriot flew the English Channel also marked the end of our insular safety and the beginning of the day when Britain must seek another form of defense besides her ships."

Bleriot was awarded a 1,000 pound prize by the *Daily Mail* for his achievement.

The Frenchman's No. XI became the prototype of all monoplanes. Its high single wing, with a tractor airscrew in front and elevators in the rear, set a new pattern for aviation which has been copied ever since. The craft was equipped with a 25-hp three-cylinder Anzani engine, maintained lateral control by wing-warping, and carried no navigational instruments. *(Smithsonian Institution photo.)*

Flying Clubs Discuss Problems, Techniques at Two-Day Clinic

Ninety leaders of general aviation were represented at a management and operations clinic sponsored by Flying Clubs International at Oklahoma City in cooperation with the FAA.

Representatives of aviation industries, underwriters, National Safety Council, Flight Safety Foundation, National Pilots Association and more than 40 civil and military flying clubs were in attendance.

Topics discussed at the recent two-day session included membership recruitment, community relations, cooperative programs with fixed base operators, club management techniques, insurance costs and obligations, operational procedures, reduction of flight costs, maintenance and operation of aircraft, and flight safety.

FAA was represented by William J. Schulte, Assistant Administrator for General Aviation Affairs, and members of nine Agency flying clubs.

Schulte, who gave the keynote address, contrasted the excellent safety record of the better clubs with that of flying clubs in general, and emphasized FAA's desire to encourage the establishment of carefully planned and well supervised flying clubs as a means of introducing people to general aviation.

The clinic was preceded by a two-day FAA Flying Club seminar.

FAA ADOPTS NEW RADAR SAFEGUARD PROCEDURES

FAA took prompt steps this summer to provide significant additional safeguards against any possible misidentification of aircraft by radar. The action followed a fatal accident involving a plane in contact with an air traffic controller stationed at March Field, Calif.

National procedures now provide that "before an aircraft can be radar identified by the use of turns, a controller must first obtain a position report from the pilot that he is within the area of radar coverage."

The Western Region of the FAA ordered immediate local changes in the air traffic control procedures used at March Field to prevent another such tragedy.

An extremely rare combination of circumstances resulted in radar misidentification of an aircraft that crashed into cloud-obscured California mountains last June. Pilot-owner Rex C. Corder and two passengers, all of California, were killed.

FAA said in its report, "Even though . . . radar identification procedures have been successfully used for a number of years, and it is highly unlikely that a similar set of circumstances would again occur, the FAA took immediate action to provide additional safeguards."

The Agency's frank report of the tragedy brought praise from the aviation community.

J. Grady Parrott, president of the Missionary Aviation Fellowship, Fullerton, Calif., said, "I would like to express our hearty commendation for the complete candor" of the FAA report.

Charles J. Millis, a pilot from Fullerton, said the FAA action in presenting a completely objective report "serves to build confidence."

The FAA controller at March Field first became involved when a target appeared on his radar scope about six miles north of Lake Arrowhead. He had been advised by the Los Angeles Air Route Traffic Control Center that Corder, flying a light, twin-engine airplane, was in that vicinity. The controller established radio contact with Corder who advised he was "approaching Arrowhead intersection." Three times the controller instructed Corder to make certain turns, including a descent to 7,200 feet. Corder acknowledged all instructions and the target on the scope executed the maneuvers.

However, the target did not respond to a fourth instruction, and Corder did not reply. At 2:51 p.m. Corder had reported he was holding level at 7,200 feet. Later, the wreckage was found at that altitude on the side an an 11,500-foot mountain with the instrument panel clock stopped at 2:54 p.m.

FAA determined after exhaustive analysis that Corder's plane was not visible on the scope and the target the controller did see has never been identified. The mystery aircraft faded off the radar screen near the outer marker of the Ontario, Calif., airport and the Ontario tower later reported that an unidentified light plane was observed east of the airport about that time. But attempts to trace the plane proved futile.

The FAA Administrator recommended that an "equitable settlement be made as soon as possible of any claims against the Government arising from the accident. This action was taken to aid the survivors in avoiding expenses and delays which often accompany litigation."

The change in procedure requiring a controller to first obtain a position report from the pilot assuring that he is within the area of radar coverage before making a radar-identification by the use of turns, does not affect radar beacon identification procedures which make misidentification nearly impossible. However, while the vast majority of airline and military aircraft are beacon equipped, the vast majority of privately-owned aircraft are not.

The FAA Administrator's recommendations were submitted to the Civil Aeronautics Board as "the proper conclusions to be drawn from the evidence revealed.

"Further, these recommendations relate to the facts, conditions, and circumstances of this accident and are not intended by the (FAA) Administrator to be a determination of probable cause."

COVER SELECTED FOR EXHIBIT

The August 1964 issue of *FAA Aviation News* was selected for showing in the "magazine cover category" of the Second Annual Art Exhibit of the National Association of Industrial Artists held last month at the Department of Commerce, Washington, D. C. The exhibit included more than 125 entries from various parts of the nation.

The cover is to be reproduced in the January 1965 issue of the *Industrial Art Methods* magazine.

Artist Abner B. Cohen designed the cover and the photography was by Richard Mowrey.

General Aviation Airlift Set for Defense Test on Oct. 3-4

Approximately 2,000 aircraft are expected to participate in a two-day general aviation exercise, Oct. 3-4, to demonstrate general aviation's airlift capability in the eastern half of the United States in case of a national emergency.

Sparked by FAA's Eastern and Southern Regions, the exercise includes the Office of Civil Defense, Civil Air Patrol, Air Force Reserve, Weather Bureau, state aviation and civil defense organizations, and general aviation groups.

While all the states involved have not yet worked out emergency plans, many of those who have already developed preliminary plans received guidance from FAA's new *State and Regional Defense Airlift Planning* booklet. While the plan, familiarly called SARDA, was not published until this summer, draft copies were made available earlier to the states involved.

The FAA has characterized the nation's fleet of 85,000 general aviation aircraft as one of our "greatest resources."

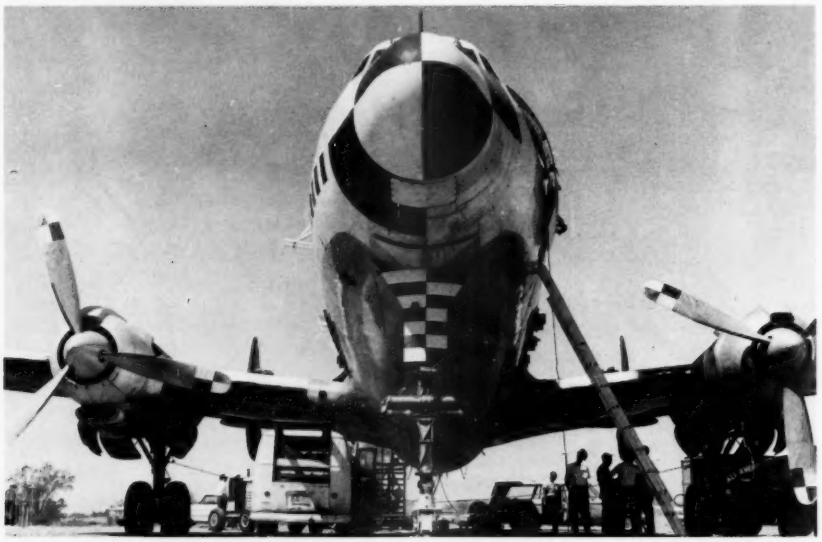
"In terms of combined airlift capability, these aircraft can haul 240,000 passengers or 44 million pounds of cargo on a one-way flight," according to the operations plan titled *Survival East and South 1964.*

FAA's new defense airlift guide is presented to Edward A. McDermott, right, Director of the Office of Emergency Planning, by the Agency's Deputy Administrator, Lt. Gen. Harold W. Grant (USAF). The booklet, titled *State and Regional Defense Airlift Planning*, was prepared by FAA and other agencies.

"During periods of national emergency this airlift capability will be of vital importance in support of military operations and national survival efforts."

SARDA planning is broader in scope than the Oct. 3-4 exercise which is limited to survival aspects. For example, special provision has been made in the guide for continuing general aviation flying during an emergency to meet priority business and personal needs.

SECOND CRASH TEST SUCCESSFUL; MAJORITY OF 'PASSENGERS' SURVIVE



Above—*Super Constellation* is poised on the guide rail while engineers make final preparations aboard the plane. Below—The *Connie* throws up a cloud of dust as it is deliberately crashed into man-made barriers simulating a crash landing accident at the Deer Valley Airport test site.

Fractured and battered, but still intact, the fuselage of the aircraft came to rest on the second hill.

On a rocky slope 20 miles north of Phoenix, Ariz., a heavily-instrumented *Super Constellation* was deliberately demolished last month to study scientific factors which affect passenger survival during typical landing and take-off accidents so that future aircraft might be designed for greater safety.

With some 300 industry observers and newsmen looking on, the four-engine aircraft, accelerated by remote control down a special 4,000-foot runway, slammed into a series of man-made and natural barriers at 115 miles per hour. It came to rest on a barren hillside some 400 feet beyond the initial barricades, its fuselage split in two places.

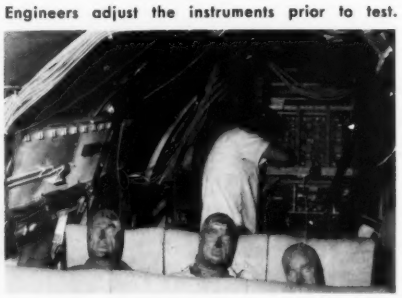
The *Super Constellation* required less than 30 seconds to sprint its last mile. There was virtually no fire since the aircraft carried only enough fuel in an auxiliary tank to carry it to the impact area. Dyed water was used in the wing tanks to show fuel spillage patterns.

FAA officials estimated that 80 to 90 per cent of the "passengers" (represented by instrumented dummies) on board the aircraft would have survived the impact forces generated by the crash. However, they added that most would have perished if there had been a fire—thus emphasizing the need for continuing research in this critical area.

Other studies included in the test were: fuel containment methods; an evaluation of gelled fuel; the strength and spacing of passenger seats; the effectiveness of rear and side-facing seats, seat belts, cargo restraint systems, litter restraint devices, and crash rescue beacons.

The crash test was the second of two such experiments performed under contract for the FAA by the Flight Safety Foundation to gather scientific data on passenger survival in landing and take-off accidents. The first test was held last April 24 with a DC-7, also at Deer Valley Airport outside Phoenix (June *FAA Aviation News*).

Engineers adjust the instruments prior to test.



"... so many VORs"

"... very easy"

"... such flying freedom"

"... excellent organization"

FLYING IN THE U.S.A.

... *C'est Magnifique!!*

"The comparative ease and freedom" that a pilot has flying in this country was uppermost in the minds of a group of pilots from France, Switzerland and The Netherlands upon completion of a 6,700-mile, 18-state air tour of the United States in 15 rented Piper *Cherokees.*

"We're just amazed at the simplicity of flying in the States," the group's leader, Robert Allaire, a Parisian attorney, stated. "It's marvelous to fly when such wonderful navigation equipment like the VORs are available."

Other comments of the pilots included: "The FAA tower controllers did everything to make flying easy . . . weather briefings were excellent . . . the radio and radar aids were wonderful . . . almost too easy . . . we want to come back!"

The group of 57 air tourists, which included 29 pilots, concluded the trip in August. It was the second such group this year.

For many, the tour was their first visit to the United States. Besides their laudatory comments about flying in the U.S.A., they were pleased with the warmth of the American people.

"Starting with a reception given in Washington where we met FAA Administrator N. E. Halaby, the hospitality of the American people has been wonderful," said Jean-Jacques Lambin, of Paris.

Climaxing the tour at the J. F. Kennedy International Airport was an added pleasure for the pilots.

"It's an honor to land at the airport bearing the name of your late President," Lambin said.

"In most European countries, a pilot of a light aircraft is not permitted to land at large commercial airports," he said. "None are allowed at Paris' Orly Field. In other large cities, light aircraft are only permitted when they do not interfere with commercial traffic."

Asked if they found anything to criticize about flying in the U.S.A., one pilot commented: "When you find a system much better than your own, you don't criticize."

Rain drives one tourist to cover under a wing.

Fifteen Piper aircraft rented for the tour line the ramp at JFK following the long journey.

CESSNA 411 Awarded

FAA CERTIFICATION

Certification of the new Cessna twin-engine executive Model 411 marked the first time the Cessna Aircraft Co. has had a commercial model in the over-6,000 pound category.

The awarding of an FAA type certificate in August followed one of the most extensive development and testing programs ever conducted by Cessna.

The aircraft was certificated under FAA's DOP (delegation option procedure) program which allowed much of the testing to be certified by Cessna itself in accordance with FAA regulations. FAA selected certain unique and/or critical areas of design, performance and flight characteristics for rechecking. For example, FAA spent considerable time reviewing the unique turbo-supercharged engine installation.

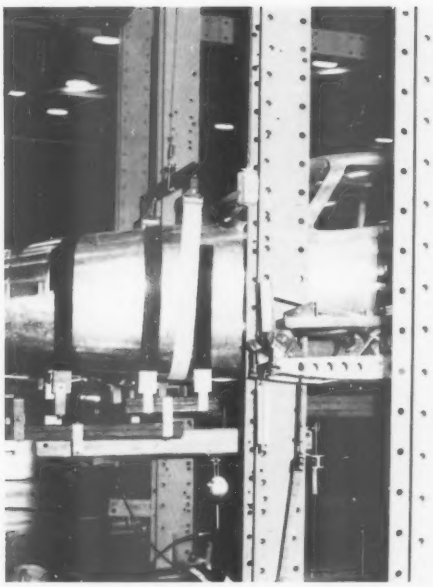
In meeting FAA's requirements for a hot fuel test, Cessna kept its test plane in a hangar heated to 110° for about five hours before taking off and climbing to maximum altitude.

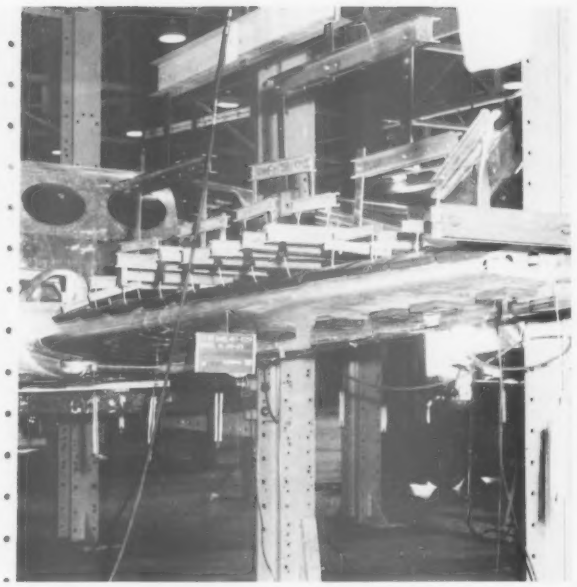
Certification tests were broken down into four broad categories:

Structures—The complete airplane, including all systems and control surfaces, was put through extensive load, flutter and vibration testing.

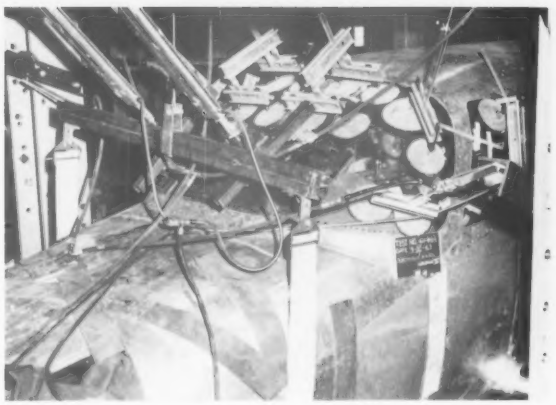
Ground tests—Typical examples includes fuel system checks for capacity and expansion space, and fuel flow tests.

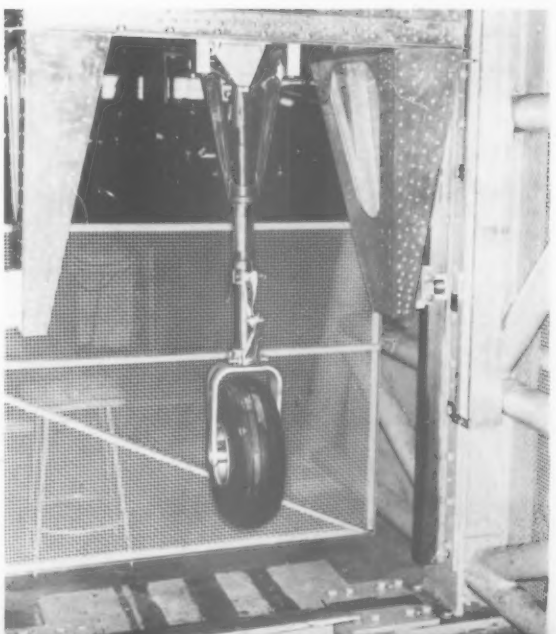
Flight tests—Although many hours of test flying were put on the prototype Model 411 to develop the final airplane design, only the last 65 flights between December 1963 and July 1964 pertained to the actual certification program. Tests





Above: Simulated flight loads are applied simultaneously to the fuselage and wing panel. Right: A "whiffle tree" is used to distribute pressure. Bottom: Landing gear drop tests check the response of the shock absorber.





during these flights were to check equipment and systems operation, power plant operation, airplane performance and flight characteristics.

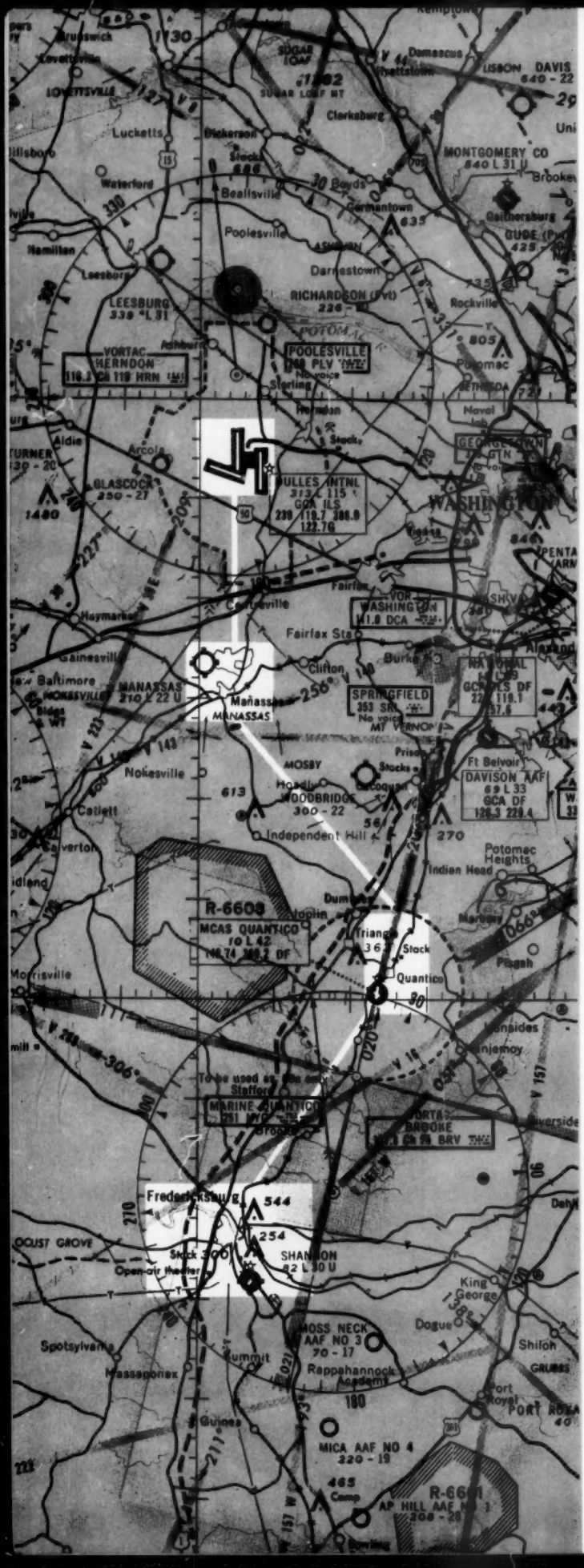
Functional and reliability testing—Required only for airplanes over 6,000 pounds gross weight, this phase of the certification program consisted of repeatedly performing certain functions—gear and flap cycling, night flights, take-offs, and landings—to "prove out" the airplane.

Throughout the test program, continual inspections were performed by Cessna technicians to assure that all details of the many certification tests were in strict accordance with FAA regulations. Vendors who supply certain systems for the airplane also conducted their own certification programs for these components.

Following final visual inspection and a flight test by FAA personnel from the Central Region headquarters in Kansas City, the long process was completed with the awarding of the Model 411's type certificate.

Production tooling is nearly finished and the first production airplane is scheduled to roll off the assembly line and be flying this month.

Designed both as a "step-up" airplane for light-twin owners and as a highly functional corporate airplane, the Model 411 will have speeds up to 265 mph and will feature flexible seating arrangements for up to eight persons. Powered by two 340-hp turbo-supercharged engines, the Model 411 marks Cessna's fourth entry into the twin-engine market.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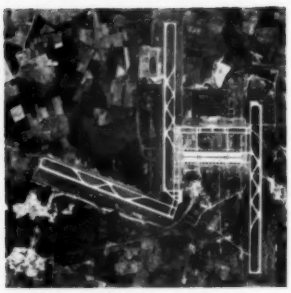


NAVIGATION By PILOTAGE

This is the seventh of a series of articles on aerial navigation.

One of the basic methods of navigation is pilotage—directing your airplane to its destination by reference to visible landmarks under visual flight rules.

Good pilotage techniques will permit the pilot to make his cross country flights more safely, will allow the pilot to spend more of his flight time to better advantage and will help him develop his over-all flying confidence.

With the aid of an aeronautical chart, a pilot can navigate by pilotage to most places in the United States. Besides guiding the pilot across the country, the chart supplies the data needed for safe flight. A careful study of the chart will indicate the height of the terrain and the location of all airfields, and give some idea of the suitability of the open area along the route for emergency landings.

This data is helpful to the pilot when he is trying to determine a safe flight altitude and a safe route with many alternate airports nearby.

A pilot's ability to reach his destination safely, and with comparative ease, will depend solely on his ability to read a sectional chart and recognize these features on the ground as he flies over them.

Although pilotage navigation can be accomplished without the aid of instruments, a compass, a radio and navaids will help the pilot positively identify the landmarks he sees from the air.

Preflight preparations should include drawing a course line on the chart from the point of departure to the destination, a study of the terrain he will overfly, a check on the weather he may encounter, a review of airport data in FAA publications (*Flight Information Manual*, and the *Airman's Guide*) and a preflight check of the aircraft

A trip from Dulles International Airport to Shannon Airport, near Fredericksburg, Va., is used here to illustrate a cross country flight applying the principles of pilotage navigation.

Although this is a comparately short trip, it illustrates some of the considerations in planning a cross-country flight.

First, a pilot should obtain the aeronautical charts needed for the flight, including charts covering areas adjacent to the route in case of emergencies. In this case, a Washington sectional covers the entire route. To determine the shortest line of flight to reach the destination, a pilot starts to draw a straight line between Dulles and Fredericksburg.

In this instance the straight route goes through a restricted area, R-6608, near Quantico, Va., forcing the pilot to work out a route around the area.

Usually, it is more advantageous to fly from one prominent landmark to another, or along a river, a shoreline, a highway or a railroad. Hazardous routes such as flights over mountains or large bodies of water should be avoided or circumnavigated. The safest route can be determined by studying the terrain features on the aeronautical chart.

After completing preflight preparations, a pilot is ready to take off on his cross country journey. After take-off it is wise—particularly for an inexperienced pilot not fully trained in navigational skills—to circle the field until he reaches the desired flight altitude. This serves two purposes: one, should trouble develop he can make an emergency landing at the field, and two, upon reaching flight altitude he can determine his wind effect and make the necessary drift correction as he proceeds toward his first landmark.

Before heading toward his destination, a pilot should orient the chart in the direction of his flight so that he can follow the path of flight over the ground.

At flight altitude over Dulles, the pilot would get the picture shown in the aerial photograph. He would note that the runway pattern as he sees it from the air is accurately represented on hi aeronautical chart.

Heading southward at an approximate magnetic heading of 175°, he would first pass over Highway #50, and moments later he would fly over two highways which radiate from nearby Fairfax.

His first large checkpoint would be the city of Manassas Park with its open air theater within the city, an airport to the west of the city, and the city of Manassas just south of it.

After passing the two cities, the pilot could proceed directly to Quantico or if he prefers could turn left and follow the Occoquan Creek to the Potomac River, then proceed down the shoreline to Quantico.

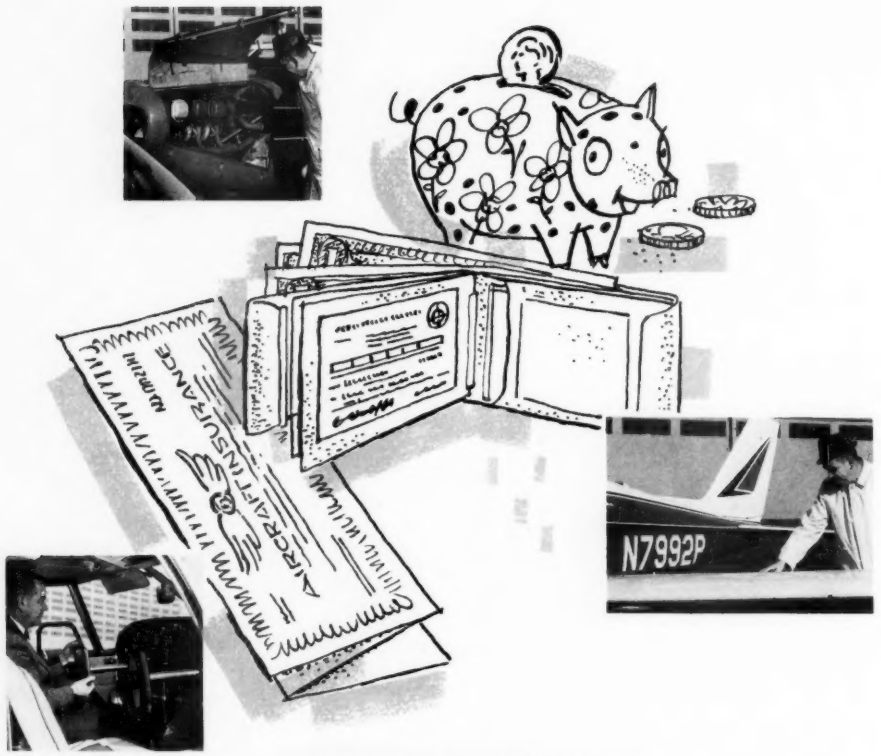
Quantico, as shown on the chart and on the aerial photograph, is easy to identify because of its location along the shore of the Potomac nestled between two water inlets, and because of the Quantico Marine Corps Air Station south of the city.

Departing from Quantico, the pilot comes across an old standby—the iron compass—the railroad tracks running south from the city and leading directly to Fredericksburg. Flying parallel to the rails will give the pilot a landfall on the Rappahannock River which passes through Fredericksburg.

A left turn along the river to a southeasterly heading for approximately two miles will lead the pilot to the north end of the Shannon Airport runway.

Throughout the entire flight, individual landmarks such as cities, rivers and railroads provided the pilot with positive fixes on the ground. The pilot did not require extensive navigation work in the cockpit after studying the route, the pinpoints, and course lines leading to his destination.

Preflight planning permitted the pilot to use most of his time for actual flying, allowing for greater safety during flight.



SAFETY FIRST

12 Golden Rules Can Reduce Aircraft Insurance Costs

The advantages of providing a financial stimulus for safe flying through a reduction in insurance premiums have been stressed repeatedly by FAA Administrator N. E. Halaby.

"There is nothing like a little folding green incentive," the Administrator told a recent "hangar flying" session. (August *FAA Aviation News.*)

D. W. Kratz, president of the National Aviation Underwriters, which publicized the *Safe Pilot's 12 Golden Rules* presented here, told *FAA Aviation News* that "conscientious use of safety measures by airmen, similar to those presented in the . . . Golden Rules, would, unquestionably, permit a substantial reduction in insurance rates in aviation."

Insurance rates, Kratz said, are controlled by three basic factors:

- The cost of satisfying claims arising out of accidents.
- Administrative costs of operating an insurance company.
- A profit or dividend of 5 or 6 per cent must be paid to the insurance company stockholders for the use of their invested money.

"A reduction in accident frequency would reduce the amount of money expended in claims settlements, which now accounts for nearly 60 cents of every premium dollar," Kratz said.

"This reduction in accident volume would produce a corresponding reduction in administrative costs. Less operating capital would be required . . . thus permitting a reduction in the monies paid out in stock dividends. The insurance companies would very much like to be able to reduce their rates . . . for they believe that at a lower rate, their business volume would increase tremendously."

1 CHECK-OUT—Plan ahead . . .

Never fly an aircraft until you have been checked out by a qualified instructor and have completed a minimum of:
a. One hour ground familiarization with controls/systems and aircraft operating limitations.
b. Eight regular take-offs and landings (day or night).
c. Two cross-wind take-offs and landings.
d. Two short field take-offs and landings.
e. Repeat above if no recent experience with this model (6 months).

2 AIRCRAFT PREFLIGHT—Plan ahead . . .

Never start engine until you have:
a. Checked weight and balance data.
b. Determined that all objects in the cabin are secure and free of the controls.
c. Completed "walk around" preflight inspection.
d. Determined that you have enough fuel on board for your flight . . . plus 15 minutes for take-off and 45 minutes at destination.
e. Drained fuel from wing tank quick drains and underengine drain into transparent container for contamination check.

3 VIGILANCE—Plan ahead . . .

When at the controls, never proceed into an area on the ground or in the air without double checking for existing or potential hazards visually and by any other means available.

4 CONTROLS AND SYSTEMS—Plan ahead . . .

a. Never operate an aircraft unless you are thoroughly familiar with the operation and correct use of all controls and systems.
b. Never start engine, take-off, cruise, letdown or land until all prescribed procedures are accomplished from a checklist.
c. Never operate an aircraft with a known malfunction. If malfunction occurs in flight, land at nearest airport.
d. When flying retractable gear aircraft, never raise flaps on landing roll. Wait until well clear of active runway, then double check the control you are activating.
e. Learn conditions conducive to the formation of carburetor ice. Stay alert for this hazard, and use carburetor heat at the first indication of icing.

5 WEATHER—Plan ahead . . .

a. During preflight—Get a thorough weather briefing. Establish clearly in your mind the current enroute conditions, the enroute forecast, and the "escape route" to good weather.
b. In flight—Never risk losing good ground reference control. When encountering 1,000 feet or 5 miles make plans for possible retreat to alternate airport. When encountering 800 feet or less than 3 miles execute these plans immediately.*
c. On top—Never fly above clouds unless they are widely scattered, and then only provided there is as least 2,000 feet from the highest ground to cloud base.*
d. At night—Never attempt a night flight unless you're sure you'll have a 2,000 foot ceiling and 5 miles visibility and will encounter no frontal fog, ground fog or storm conditions.*
*Items b, c and d do not apply if pilot is current and qualified for IFR.

6 SPEED/STALL CONTROL—Plan ahead . . .

Never abruptly change the attitude of an aircraft nor allow its airspeed to drop below:
a. At least 160 per cent of stall speed when maneuvering below 1,000 feet.
b. At least 140 per cent of stall speed during straight approach or climb out.
c. At least 130 per cent of stall speed over threshold and ready for touchdown.

7 NAVIGATION—Plan ahead . . .

a. Plan to reach destination one hour before sunset unless qualified and prepared for night flight.
b. Never operate at an altitude less than 500 feet above highest obstruction (2,000 feet in mountain area) except on straight climb from take-off or straight-in approach to landing.
c. Predetermine "ETA" over all check points. If lost, never deviate from original course until oriented. Always hold chart so plotted course coincides with flight path.
d. Divert to nearest airport if periodic fuel check indicates you won't have 45 minutes reserve at destination.

8 TAKE-OFF/LANDING AREA—Plan ahead . . .

a. Never take off or land unless on designated airports with current runway maintenance.
b. Be sure the runway length is equal to aircraft manufacturer's published take-off or landing distance plus . . . 80 percent safety margin if hard surface, double the manual distance if sod, and triple the manual distance if wet grass (about same traction as ice).
c. After dark use only well-lighted, night-operated airports, and then use steeper approach attitude to clear unlighted obstacles.

9 TAKE-OFF/LANDING LIMITS—Plan ahead . . .

a. Always plan touchdown 200 feet inside of runway threshold.
b. Abort take-off if not solidly "airborne" in first ½ of runway.
c. Abort landing if not solidly "on" in first ⅓ of runway. (First ¼ if wet grass.)
d. Never relax control until engine is shut down and wheels are blocked.

10 WIND LIMITS—Plan ahead . . .

a. Never attempt taxiing when crosswinds or gusts exceed 50 percent of stall speed unless outside assistance is used. Taxi very slowly when winds exceed 30 percent of stall speed.
b. Never attempt take-off or landing when 90° surface cross-winds exceed 20 per cent of stall speed, or 45° surface winds exceed 30 per cent of stall speed.
c. Never taxi closer than 1,000 feet from "blast" end of powerful aircraft and then only when headed into remaining blast effect.
d. Never follow a powerful aircraft on take-off, in the air, or on landing without allowing for turbulence to subside (two minutes if a jet).

11 PHYSICAL CONDITION—Plan ahead . . .

Never attempt to pilot an aircraft if:
a. Less than 24 hours have elapsed since drinking alcoholic beverages.
b. You are extremely fatigued.
c. You are taking tranquilizing or sleep-inducing drugs.
d. You are emotionally upset.
e. You are hypoxic from oversmoking, or from operating above 10,000 feet without oxygen.

12 STARTING ENGINE—Plan ahead . . .

Never attempt to hand-start an aircraft engine unless a qualified person is at the controls or, in an emergency, unless all wheels are securely blocked and strong, tight tiedowns are affixed to both wings and tail.

IDAHO SOLVES MISSING LINK

It was dusk when the light plane touched down on the lonely airstrip four miles from the nearest town.

The pilot walked to the small building at the edge of the field. Locked and deserted.

No telephone, no transportation. He shrugged and began the long hike to town down the dusty, winding road.

Such situations, repeated hundreds of times at hundreds of remote airfields, have bedeviled pilots since the dawn of general aviation.

Flying farmers, businessmen and sportsmen have been thwarted and frustrated time and time again by such lack of surface transportation, particularly at smaller airports.

But the State of Idaho, with scores of remote airfields used primarily for recreation, ranching and forestry purposes, recently came to grips with the problem. The impetus came after a poll of pilots made by the farsighted Idaho Department of Aeronautics indicated that the lack of surface transportation at airports constituted the greatest single deterrent to an increase in aircraft.

In one form or another, pilots lamented: "How do we get around, make our calls and conduct our business after we land at the airport?"

A study showed that less than 15 communities in the state offered taxi service and even fewer had rental car agencies. Many communities with thousands of dollars invested in local airports found that their fields were lying idle, bypassed because of lack of ground transportation.

Idaho attacked the problem by securing a fleet of surplus military automobiles to be made available for rental purposes to pilots. They were repaired, equipped and painted a uniform color. The words "Airport Courtesy Car" were lettered on each side.

The state pays half the cost of a carport, and provides insurance, heaters and license plates. Local airports pay half the cost of putting the cars into service.

A decal on the dashboard of each vehicle gives the pilot a schedule of recommended "user charges" which are less expensive than conventional rental cars or taxis.

Literature in the vehicles reminds drivers that the cars are primarily for use between the airport and the community. Any travel to other areas must be specifically authorized by the airport operator.

By supplying courtesy cars, the Idaho Department of Aeronautics—supplemented by fixed-base operators who provide similar transportation—has encouraged the growth of general aviation by filling in the missing link between the airport and the town. Flying in Idaho is now more convenient, less expensive, and more fun.

Letters

FAA

FAA Aviation News welcomes comments from the aviation community. We will reserve this page for an exchange of views. No anonymous letters will be used, but names will be withheld on request.

● Foreign Licenses

I am an American citizen returning to the U. S. after four years residence in Switzerland and would like to inquire into the possibility of using my Swiss license in the U. S. If this is not possible, what are the procedures for obtaining an American license?

E. S. Bjornsson
Wallisellen, Switzerland

Issuance of a special purpose pilot certificate on the basis of a foreign pilot certificate applies only to foreign citizens. Logged flying time, however, may be credited toward the aeronautical experience requirements for pilot certification in the U. S.

In addition to meeting aeronautical experience requirements, an applicant is required to pass a written test, hold an appropriate medical certificate, meet the minimum age requirement, and pass a flight test, all of which are prescribed in FAR's Part 61, which may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, for 30 cents.

● Gold Seal Rating?

I heartily support the concept of a limited instrument rating. Many of us desire to go beyond the Blue Seal proficiency requirements, but feel the one step approach to an instrument rating is too large a gap to bridge for our limited application. Why not an intermediate step called the Private Pilot Gold Seal Proficiency rating? The Gold Seal program would allow specific instrument privileges after demonstration of competence.

R. W. Tipton
Winter Park, Fla.

The consensus of technical personnel within the FAA and the general aviation industry is that any advantages which a limited instrument rating might introduce would be outweighed by safety disadvantages. The best weather forecasters often find weather developments to be quite different from those anticipated. Encouraging an individual to conduct a flight in which only portions were expected to require instrument flying, might well lead him into a trap from which he would not have the background to make a successful recovery. Unanticipated mechanical or human factors may make a return to the starting point mandatory. In such an instance, a pilot qualified only to fly from take-off through a low visibility layer to on-top conditions would find himself confronted with an instrument approach situation.

● ATR Certificate

One of our chief pilots raised an interesting point in reference to FAA's Advisory Circular AC 90-13 "Turbojet Training Program—General Aviation" and in particular to Section 5(c)(1) in which the FAA states that it is necessary for an applicant to have an "ATR certificate and type rating in the aircraft utilized." The chief pilot accurately pointed out that there is no regulatory requirement for anyone in general aviation operations to have an ATR certificate. With this lack of requirement, how can the FAA impose, without some regulatory action, this check pilot ATR certificate requirement for a pilot engaged in only general aviation activity?

William K. Lawton
Washington, D. C.

We agree with the chief pilot that there is no regulatory requirement for anyone in general aviation operations to hold an ATR certificate. The recommended experience for a company check pilot as shown in Advisory Circular 90-13 is not regulatory in nature, but rather an experience standard which should be met in the event the corporation desires to have a company check pilot as part of its voluntary pilot check program. He should meet the experience requirements for an ATR certificate and have 100 hours pilot-in-command in the type aircraft in which he will conduct proficiency checks. This change is being included in an advisory circular now being developed entitled "Large Propeller-Driven Aircraft Training Program—General Aviation."

● Balloon Pilot Requirements

Please supply me with information on obtaining a free-balloon pilot's license for sport?

Carroll C. Stahl, II
Bloomsburg, Pa.

Free balloon pilot certificate requirements are listed in Subpart G of Federal Aviation Regulations *Part 61, "Certification; Pilots and Flight Instructors." Essentially, they require that an applicant hold a student lighter-than-air pilot certificate; be at least 17 years of age; be able to read, speak, and understand the English language; hold at least a third-class FAA medical certificate; pass a written exam on pertinent FAR's, meteorology, navigation, and the general operation of free balloons; have a minimum amount of logged free balloon piloting experience under proper supervision, and show the ability to pilot and maneuver a free balloon in solo flight.*

● Recheck Out Period

In 1958 I discontinued flying until this year. I should like to state that my recheck out period was well worth the effort. My knowledge of flying has more than doubled! In short, I, for one, would not object to being flight-checked at the end of my medical period. I am sure it will be to my advantage as bad flying habits could easily be corrected by a certified flight instructor.

Donald B. Wall
Atlanta, Ga.

Recommendations similar to yours have been under consideration by the FAA for some time. We appreciate your comments and assure you that they will be considered in future determinations.

● Voice of Oklahoma

Oklahoma is proud to have played a small part in the pioneering research which is now under way in connection with the national supersonic transport program.

The vast majority of the citizens of the Oklahoma City area were pleased to participate in this forward-looking endeavor. We fully appreciate the importance of the aviation industry to the growth of Oklahoma and the nation. We look forward to active participation in future developments.

By this letter I wish to convey the thanks and congratulations of the citizens of Oklahoma to the employees and officials of the Federal agencies for the courtesy and consideration shown during the recently concluded tests.

Henry Bellmon, Governor
State of Oklahoma

● Errata

In reference to the "Wind Direction and Velocity" problem on page 14, August issue, *FAA Aviation News*, it seems that the solution as indicated by the computer is in error. I realize the inherent degree of error in this type of computer. However, a 25 per cent error does seem excessive, especially if encountered on an FAA written examination.

Earl J. Kenzie
Detroit, Mich.

Sharp-eyed reader Kenzie is right. The sample problem—finding wind direction and velocity—incorrectly stated one set of figures, and the solution using the computer had another set of figures.

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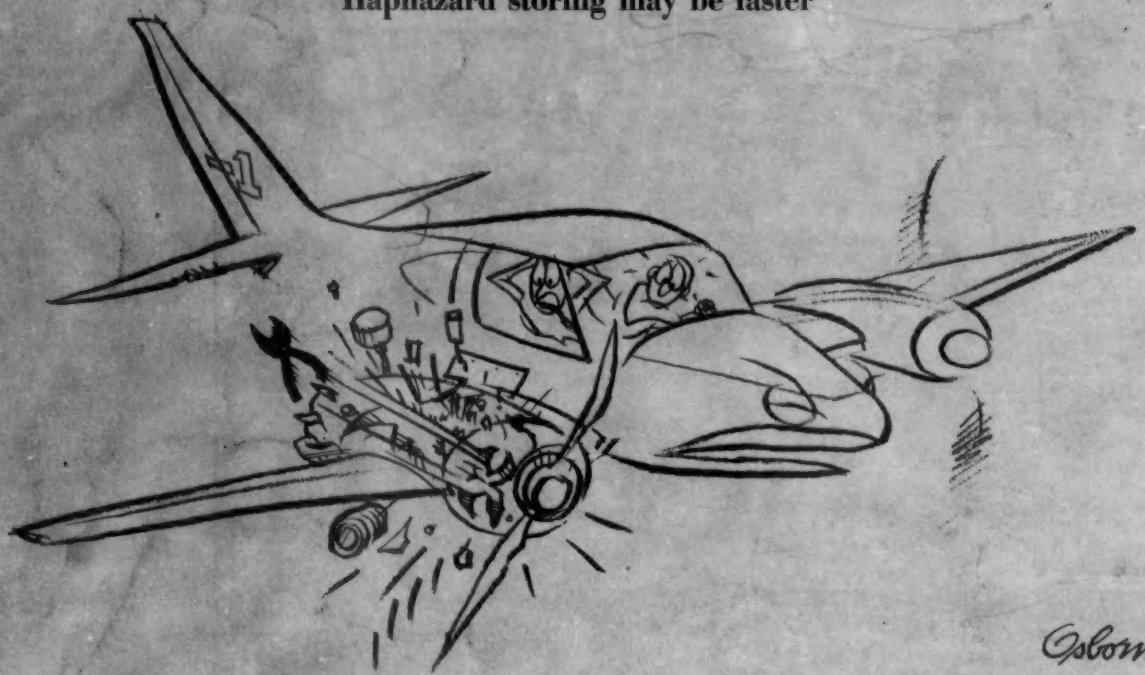
Haphazard storing may be faster



Osborn

But misplaced tools can cause disaster